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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,951	08/21/2003	Kinichi Higure	500.43030X00	6801

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MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.  
1800 DIAGONAL ROAD  
SUITE 370  
ALEXANDRIA, VA 22314

EXAMINER

CORRIELUS, JEAN B

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/644,951	<b>Applicant(s)</b> HIGURE, KINICHI	
	<b>Examiner</b> Jean B. Corrielus	<b>Art Unit</b> 2611	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 is/are allowed.
- 6) ☒ Claim(s) 12,13 and 19-21 is/are rejected.
- 7) ☒ Claim(s) 5-11, 14-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/21/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “the output of the second frequency error detection unit provided to the decision unit for comparison as recited in claim 3, the first and second phase inverter as recited, for instance in claim 5 and other related claims, (Note that the drawing only shows first and second complex conjugate circuits for generating a complex conjugate signal, respectively, not to invert a phase of a received signal); “ must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

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the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Information Disclosure Statement***

2. The information disclosure statement filed 8/21/03 has not been considered because it does not comply with 37 CFR 1.98. It has been placed in the application file, but the information referred to therein has not been considered. Use of form PTO/SB/08A and 08B, "Information Disclosure Statement," is encouraged as a means to provide the required list of information as set forth in 37 CFR1.98 (a)(1). Applicants are encouraged to use the USPTO form PTO/SB/08A and 08B when preparing an information disclosure statement because this form is updated by the Office. \*\* The form PTO/SB/08A and 08B will enable applicants to comply with the requirement to list each item of information being submitted and to provide the Office with a uniform listing of citations and with a ready way to indicate that the information has been considered.

### ***Claim Objections***

3. Claims 5-11 and 14-18 are objected to because of the following informalities: Claim 5, line 15, "value" should be replaced by "product" for consistency; line 19, "first" should be inserted before "frequency" for consistency; line 35, "value" should be replaced by "product" for consistency; line 39, after "as said", "second" should be inserted.

Claim 6, line 7, "the " should be replaced by "a". Claim 7, line 2, "the " should be replaced by "a". Claim 8, line 7, "the " should be replaced by "a".

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Claim 9, line 26, "corrected baseband signal" should be inserted before "output" and "of" should be replaced by "from"; line 31, "corrected baseband" should be inserted before "signal". Claim 11, line 1-2, "for signals" should be deleted. Claim 14, line 2, after "comprising", "steps of" should be inserted and the occurrence of "step of" in steps a-f, should be deleted. Claim 15, line 6, "the" should be replaced by "a". Claim 16, line 2, "the" should be replaced by "a"; line 6, "the" should be replaced by "an". Claim 17, line 2, after "comprising", "steps of" should be inserted and the occurrence of "step of" in steps g-m, should be deleted; line 5, "from" is mistyped as "from". Claim 19, line 3, after "comprising", "steps of" should be inserted and the occurrence of "step of" in steps n-s, should be deleted; step p), "quadrature" is mistyped as "quadrture"; step r), "the corrected error" should be replaced by "a corrected baseband signal"; step s) "baseband" is mistyped as "pbaseband" and after "the", "corrected" should be inserted. Claim 21, line 13, "the output of" should be deleted. Claim 22, line 3, "the" should be replaced by "a"; line 25, "conjugate" is mistyped as "conjugated"; line 33, "first or second" should be inserted before "frequency". Note that any claim whose base claim is objected is likewise objected.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 12-13 and 19-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12, last line, the limitation "said frequency corrector" lacks of proper antecedent basis.

Claim 19, last line, "said step t)" lacks of proper antecedent basis.

Claim 21, line 13, "the error values" lacks of proper antecedent basis.

Note that any claim whose base claim is rejected is likewise rejected.

***Allowable Subject Matter***

6. Claims 1-4 are allowed.

7. Claims 5-11, 14-18 would be allowable if amended to overcome the objection sets forth above.

8. Claims 12-13, 19-22 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.


9. The following is a statement of reasons for the indication of allowable subject matter: a method and apparatus for generating an AFC signal are disclosed. The closest prior art Asahara et al US Patent No. 6,631,174, discloses similar method and apparatus. However, Asahara et al does not teach or fairly suggest the limitations of recited in claim 1, lines 3-22, claim 14 step a-f and claim 21, lines 3-18.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Corrielus whose telephone number is 571-272-3020. The examiner can normally be reached on M-TH 10:00 AM until 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Jean B Corrielus  
Primary Examiner  
Art Unit 2611  
12-7-06